

Imperial Valley and Mexicali Air Quality Alerts and Forecasting

Project Overview

The California Air Resources Board (CARB) and the Imperial County Air Pollution Control District (District) operate a network of air quality monitoring stations in the Imperial Valley-Mexicali region. Various agencies and individuals use the air quality data collected at these stations to assess the nature and extent of air pollution in the region, determine attainment with National and State ambient air quality standards, and evaluate pollutant transport.

Air quality data collected by each agency follows separate streams into National and State databases. CARB operates one air monitoring station in Calexico, California, which connects to a data acquisition system that allows the retrieval (polling) of air quality data and real-time display on the internet. The District operates four (4) stations and conducts hourly polling from a central location.

Two (2) stations in Mexicali record atmospheric fine particulate matter (PM_{2.5}) data and one (1) site records ozone data. Data from Mexicali stations improve the forecast and alerts for the border region. Information provided through the District's website will allow border area residents to take steps to reduce their exposure. In addition to providing access to real-time air quality data, the real-time display on the internet mentioned above will allow area residents to sign-up to receive email/phone app notifications when air quality in the border region reaches unhealthy levels (see Figure 1).

This project, referred to as the *Imperial Valley and Mexicali Air Quality Alerts and Forecasting* system, provides air quality information, in English and Spanish, to allow residents of Imperial County and Mexicali to take steps to protect their own health when air quality is unhealthy. Air quality reporting allows local residents to plan their strenuous activities to minimize exposure to unhealthy levels of pollution. By providing forecasts and alerts, this project may reduce the number and severity of asthma attacks, thereby resulting in fewer missed school days and fewer visits to hospital emergency rooms.

A contractor currently maintains the *Imperial Valley and Mexicali Air Quality Alerts and Forecasting* system for reporting concentrations of ozone, fine particulate matter (PM_{2.5}), and particulate matter of 10 micrometers or less (PM₁₀). The contractor creates and provides daily air quality reports for ozone during the high ozone-season; year-round air quality reports for PM_{2.5} and PM₁₀; and air quality alerts through the webpage, email list

serve, and mobile application when local air reaches (or is predicted to reach) unhealthy levels for Imperial County and Mexicali.

Justification for Extension

Funding for the current contract for the *Imperial Valley and Mexicali Air Quality Alerts and Forecasting* work is set to expire in September 2020 and CARB is requesting approximately \$105,000 to maintain this work through September 2021. This request is for continued support and maintenance of an existing project.

As discussed the Overview section above, this work provides meaningful information to an array of stakeholders, including regulatory agencies, community groups, local health advocates, and the public in assessing ozone and particulate matter concentrations on a daily basis. The website is available in Spanish and English and provides users with forecasts of ambient ozone levels and particulate matter (PM₁₀ and PM_{2.5}) levels.

Providing residents on both sides of the U.S.-Mexico border in Imperial County air quality data via a website and cell phone alerts is a valuable service that provides information to area residents that enables them to minimize their exposure to harmful pollutants. If this service is not continued, it may result in an increase in the frequency and severity of asthma and other air quality-related health impacts to community members.

Figure 1. Forecast email alerts

Mexicali Air Quality Forecast

6/19/2020 11:30 AM

Forecast

Friday, Jun 19		Saturday, Jun 20	
Moderate		Moderate	
Ozone	87 AQI	Ozone	93 AQI
PM _{2.5}	63 AQI	PM _{2.5}	68 AQI
PM ₁₀	56 AQI	PM ₁₀	58 AQI

Extended Forecast

Sunday, Jun 21	Monday, Jun 22	Tuesday, Jun 23
Ozone	Ozone	Ozone
Moderate	Moderate	Moderate

Discussion

Today and tomorrow, sunny and warm conditions will support ozone formation in Mexicali. In addition, light winds during the daytime hours will reduce mixing and dispersion. Therefore, AQI levels will be Moderate on both days.

This forecast was issued for the Imperial County Air Pollution Control District. Visit <http://www.imperialvalleyair.org> for current readings, ozone movies, and additional air quality information.

To change your AirAlert subscription, go to <http://www.imperialvalleyair.org/airalert.htm>

Forecast

Friday, Jun 19		Saturday, Jun 20	
Moderate		Moderate	
Ozone	90 AQI	Ozone	100 AQI
PM _{2.5}	46 AQI	PM _{2.5}	53 AQI
PM ₁₀	51 AQI	PM ₁₀	53 AQI

Extended Forecast

Sunday, Jun 21	Monday, Jun 22	Tuesday, Jun 23
Ozone	Ozone	Ozone
Moderate	Moderate	Moderate

Discussion

Today and tomorrow, light southeasterly winds during the daytime hours will gradually transport regional pollutants into the Imperial Valley. In addition, hot temperatures and sunny skies will continue to aid ozone production. Therefore, AQI levels will be high-Moderate on both days.

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